



Long Range Estimates for Non-Estimators

Presented by:

Cheri Sylvester Estimating Systems Support Manager

Dianne Perkins Estimates Coordinator

Objective of this Session

To introduce you to the purpose, features, and capabilities of the Long Range Estimates system.

This session is not intended to teach you the intricate details of developing an LRE estimate.

LRE New User Training – BT-05-0101

Today's Topics

1

- Estimating Systems

2

- LRE Basic Concepts

3

- LRE Pricing

4

- Demonstration

5

- Snapshots

6

- Communication

Why Do We Have LRE?

- LRE is the tool used for developing construction cost estimates for the 5-Year Work Program early in the development of the project.

Phase 52 PDC in Work Program should match the LRE estimate

Home Estimates 230717-2-52-01 Versions Version 2-P

Main FM % Factor Non-Bid Sequences Create Seq Renum Prices Replace T*P

Last Update4/8/2009 10:26:31 AM

By UserIDPM404GL

No Sequences this Project1

Sequences Subtotal	\$1,139,699.14	Landsc
MOT Cost	\$113,969.91	
Mobilization Cost	\$100,293.52	Curren
		% Diffe
Project Sequences Total	\$1,353,962.57	
Project Unknowns Amount	\$0.00	
Non-Bid Amount	\$50,000.00	
Project Grand Total	\$1,403,962.57	

Requested Version: G
Item/Segment: 230717
Desc: FIESTA WAY
Trans System: 16 OFF
Begin Search At Phase
FP
ver Phase Seq Year
c1 3 0 0 2010

FDOT- Work Program Administration									
Item Segment Phase									
Requested Version: G1									
Item/Segment: 230717 2 Status: 010 PRE-CONST.UNDERWAY Old Item									
Desc: FIESTA WAY BRIDGE# 865735 OVER LAS OLAS									
Trans System: 16 OFF STATE HWY SYS/OFF FED SYS Man Dist: 04 Box									
Begin Search At Phase: _ _ FP Seq: _ _ Project Total: 2,224									
	FP	PDC	Total	All	Dstr				
Ver	Phase	Seq	Year	Fund	Pgm	Amount	Amount	Typ	Typ/Area
G1	3	9	01	2010	EBOH 00	395	395	1	
	5	2	01	2012	BRTZ 03	1,403,963	1,601,922	1	
	5	6	01	2011	BRTZ 04	41,886	41,886	1	



Why do we have 2 estimating systems?

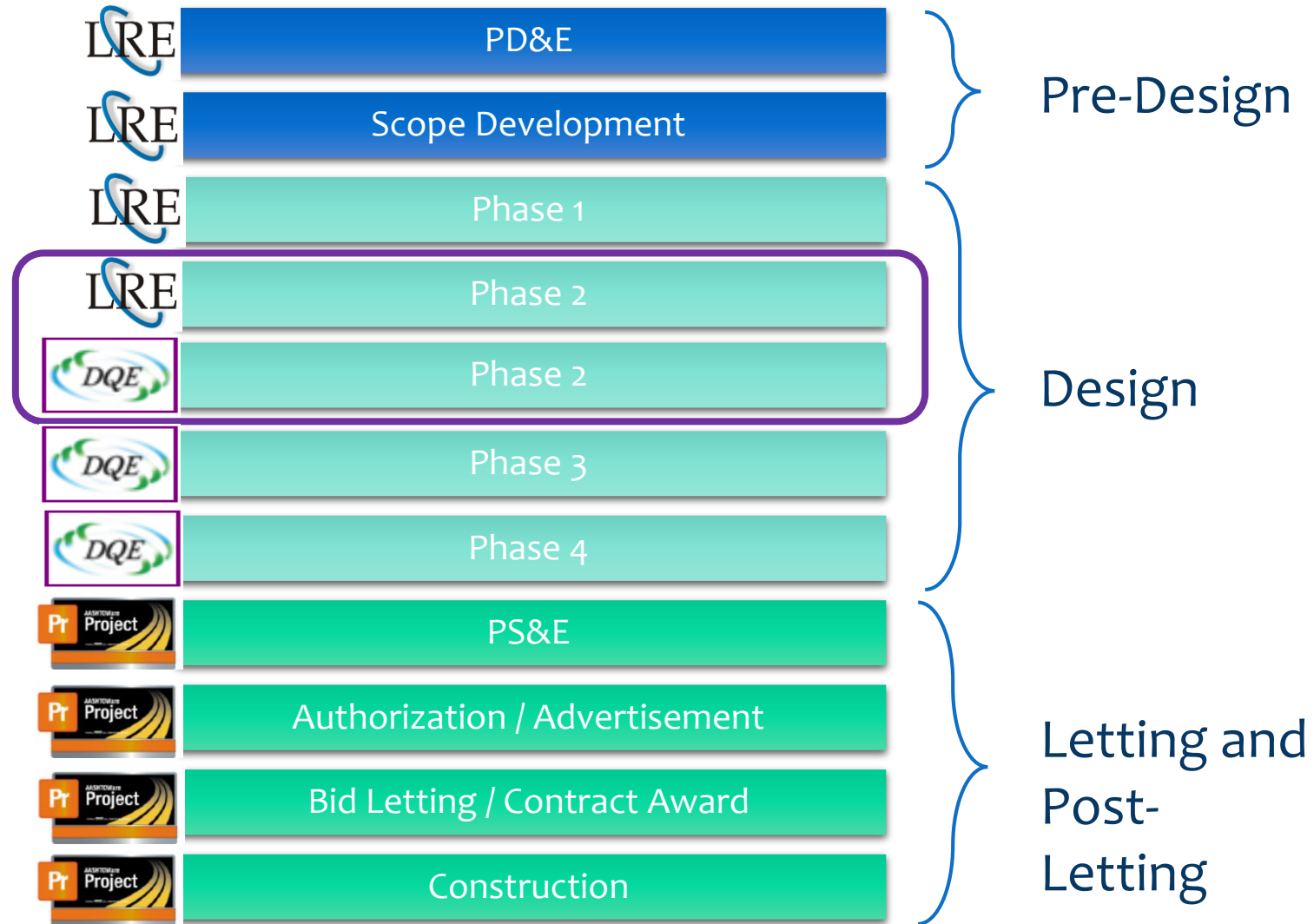
- **LRE**

- Pre-Design estimate, used in establishing funds for future projects
- Generates pay items and quantities you can EXPECT to have, based on project characteristics (typical section, length, etc).



- Design estimate, used to develop the Department's Official Estimate, for bid comparison purposes
- Contains KNOWN pay items and quantities, based on complete (or nearly complete) plans.

Estimate Phase Progression



LRE Basics

- Project Structure
- Typical Sections
- Pay Items and Quantities
- Unit Prices and Price Refresh

LRE Project Structure



Typical Sections

- 12 models are available in LRE, reflecting:

- **Construction type**

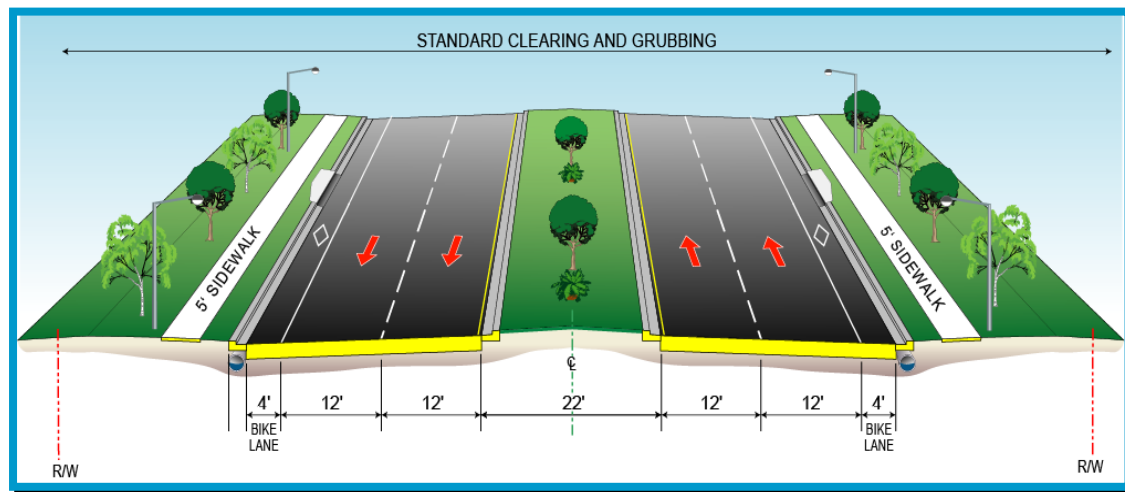
- New Construction
- Resurfacing
- Widening

- **Median**

- Divided
- Undivided

- **Shoulder type**

- Rural
- Urban



- Default values representing typical section characteristics are pre-coded into the models. These values can be changed.

Pay Items and Quantities

- For the “key” components, typical section quantities are based on formulas:

- Earthwork
- Roadway
- Median
- Shoulder

- Characteristics are applied to a length of roadway to generate:

- Pay items
- Quantities
- Unit prices

Roadway Turnouts/Crossovers Pavement Marking Peripherals X-Items EX-Items
 Zero Out Prices Reset to Defaults Calculate Undo Calc Save

Number of Lanes
 Roadway Pavement Width Left LF Right LF

			Calculated Values		
			Quantity	Unit Price	Extended Amount
Stabilization	<input type="text" value="160-4"/> Desc		38,907.73 SY	\$ <input type="text" value="3.30"/> C	\$73,146.53
Base	<input type="text" value="285-709"/> Desc		32,853.33 SY	\$ <input type="text" value="17.26"/> C	\$724,087.39
Structural Course	<input type="text" value="334-1-13"/> Desc		4,928.00 TN	\$ <input type="text" value="84.19"/> M	\$372,606.08
Spread Rate	<input type="text" value="300"/> LB/SY				
Friction Course	<input type="text" value="337-7-6"/> Desc		2,628.27 TN	\$ <input type="text" value="160.52"/> S	\$181,666.02
Spread Rate	<input type="text" value="160"/> LB/SY				
Concrete Pavement	<input type="text"/> Desc		0.00	\$ <input type="text" value="0.00"/>	\$0.00

Zero Out Prices Reset to Defaults Calculate Undo Calc Save

Pay Items and Quantities

Drainage

Detail Total \$1,269,715.97

Add CD Items

Add X-Items

Add EX-Items

Reset to Defaults

Calculate

Undo Calc

Return

Save

☐ Select All Items to Delete on This Page

Del	Item #	Description	Quantity	Unit Price	Extended Amount
Component Detail Items					
1	<input type="checkbox"/> 400-2-2	CONC CLASS I	18.00	CY \$ 1,300.00 C	\$23,400.00
2	<input type="checkbox"/> 425-1-351	INLETS, CURB	36	EA \$ 4,551.62 M	\$163,858.32
3	<input type="checkbox"/> 425-1-451	INLETS, CURB	10	EA \$ 7,196.67 M	\$71,966.70
4	<input type="checkbox"/> 425-1-521	INLETS, DT B	5	EA \$ 4,006.09 C	\$20,030.45
5	<input type="checkbox"/> 425-2-41	MANHOLES, P-	5	EA \$ 3,773.30 S	\$18,866.50
6	<input type="checkbox"/> 430-171-101	PIPE CULV OP	2,648.00	LF \$ 73.11 M	\$193,595.28
7	<input type="checkbox"/> 430-171-103	PIPE CULV OP	5,000.00	LF \$ 150.02 M	\$750,100.00
8	<input type="checkbox"/> 430-172-102	PIPE CULV OP	240.00	LF \$ 113.04 S	\$27,129.60
9	<input type="checkbox"/> 570-1-2	PERFORMANCE	304.00	SY \$ 2.53 C	\$769.12

Add CD Items

Add X-Items

Add EX-Items

Reset to Defaults

Calculate

Undo Calc

Return

Save

Bridge Component

- 2 methods of estimating bridges in LRE:
 - Cost-per-Square-Foot
 - Bridge Item Details
- Designed to work with the common bridge designs (the “90%”):



Superstructures	Substructures	Foundations
FL I-Beam	Pile Bents	Prestressed Square Piles (18” & 24”)
FL U-Beam	Drilled Shaft Bents	Drilled Shafts (48” & 60”)
Slab (Cast in Place)	Multi Column	Steel Piling (14 x 89 and 14 x 117)
Steel Box	Hammerhead	
Steel Plate Girder		

Date: 6/6/2012 12:55:52 PM

FDOT Long Range Estimating System - Production
R4: Project Details Composite Report
By Version

Project: LRE101-1-52-01

Letting Date: 01/2099

Pay Items

Pay Item	Description	Total Unit Quantity	Weighted Avg. Unit Price	Total Amount
102-1	MAINTENANCE OF TRAFFIC	10.00		\$175,472.36
101-1	MOBILIZATION	10.00		\$193,019.59
104-10-3	SEDIMENT BARRIER	13,728.00 LF	\$4.16	\$57,108.48
104-11	FLOATING TURBIDITY BARRIER	250.00 LF	\$13.11	\$3,277.50
104-12	STAKED TURBIDITY BARRIER- NYL REINF PVC	250.00 LF	\$3.14	\$785.00
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	\$1,400.00	\$1,400.00
107-1	LITTER REMOVAL	1.20 AC	\$22.09	\$26.51
107-2	MOWING	1.20 AC	\$56.27	\$67.52
110-1-1	CLEARING & GRUBBING	12.12 AC	\$11,635.37	\$141,020.68
120-6	EMBANKMENT	54,689.07 CY	\$5.31	\$290,398.96
160-4	TYPE B STABILIZATION	25,813.33 SY	\$6.50	\$167,786.64
285-709	OPTIONAL BASE,BASE GROUP 09	14,467.20 SY	\$14.18	\$205,144.90
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,936.00 TN	\$82.09	\$158,926.24
337-7-33	ASPH CONC FC,TRAFFIC C,FC- 12.5,RUBBER	1,161.60 TN	\$101.29	\$117,658.46
400-2-2	CONC CLASS II, ENDWALLS	18.00 CY	\$810.74	\$14,593.32
400-2-4	CONC CLASS II, SUPERSTRUCTURE	226.85 CY	\$573.75	\$130,155.19
400-2-10	CONC CLASS II, APPROACH SLABS	67.62 CY	\$325.85	\$22,033.98
400-4-5	CONC CLASS IV, SUBSTRUCTURE	153.72 CY	\$725.87	\$111,580.74
400-9	BRIDGE DECK GROOV & PLANING, DECK 8.5">	346.67 SY	\$5.54	\$1,920.55

LRE Prices



- Default Average Prices for County, Market Area, and Statewide
 - Price file is refreshed nightly;
this does not refresh the prices that are on existing projects!
 - Uses most recent 36 months of bid history;
 - Uses all bids, not just low bid;
 - Weighted average, with outliers omitted.
- Project prices
 - Initially, the lowest level default price available will populate the unit price field, but user can select a different price;
 - District LRE Coordinators can perform a refresh of project prices, whenever necessary.
 - District LRE Coordinators can lock unit prices on projects.

Project Scope Issues, Work Program Stability, and Communication

The Estimator will represent the project scope to the best of his or her knowledge.

Scope Tracking & Snapshots

- Changes in Estimate amounts are tracked by using point-in-time “snapshots” at project milestones:
 - Initial Estimate
 - Scope Estimate
 - Phases 1-4
- Reasons for changes in cost are included:
 - Material cost changes
 - Scope Creep or quantity refinements
 - Scope changes (due to design changes)

Version 2-P Project Grand Total **\$21,033,122.30**

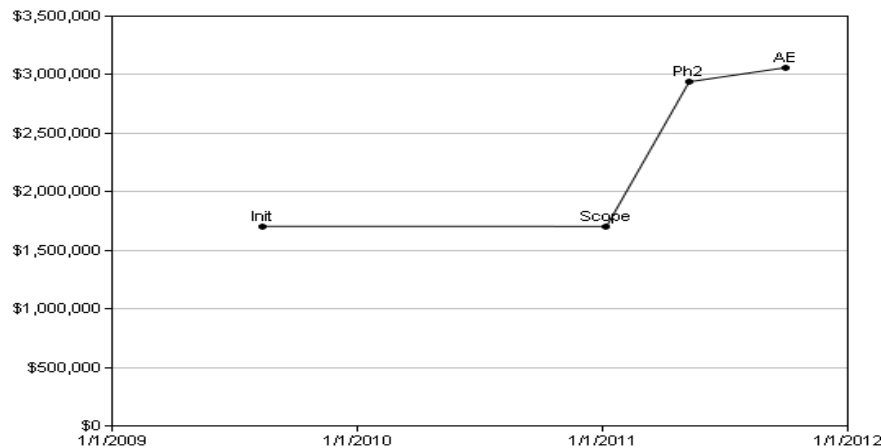
Date Taken: 01/07/2011 11:25:21 AM
Manual / Auto: Manual
Last Update: 08/18/2011 03:13:08 PM by
Snapshot Label: Scope LRE
Snapshot Description: Scope added noise wall
Reason(s) for Change:
Scope Changes
Description: Scope added
System Generated

Version 4-P Project Grand Total **\$5,092,171.90**

Date Taken: 08/15/2011 01:55:33 PM
Manual / Auto: Manual
Last Update: 08/18/2011 04:53:01 PM by KN846RE
Snapshot Label: Scope LRE
Snapshot Description: Scope estimate, unit prices adjusted.
Reason(s) for Change:
Material Cost Changes **\$120,132.12**
Description: Unit prices adjusted based on recent bids.
System Generated

Scope Changes

What happens to the estimate when the scope changes?



	Snapshot 1 8/14/2009 Version 1-P	Snapshot 2 1/7/2011 Version 1-P	Snapshot 3 5/10/2011 Version 3-P	Snapshot 4 10/1/2011 Version 4-P
Grand Total	\$1,704,498.63	\$1,703,786.30	\$2,939,366.83	\$3,060,600.00
Phase	Initial LRE Estimate	Scope LRE	Phase 2 (60% Plans)	Authorization Estimate
% Change		-0.04%	72.52%	4.12%



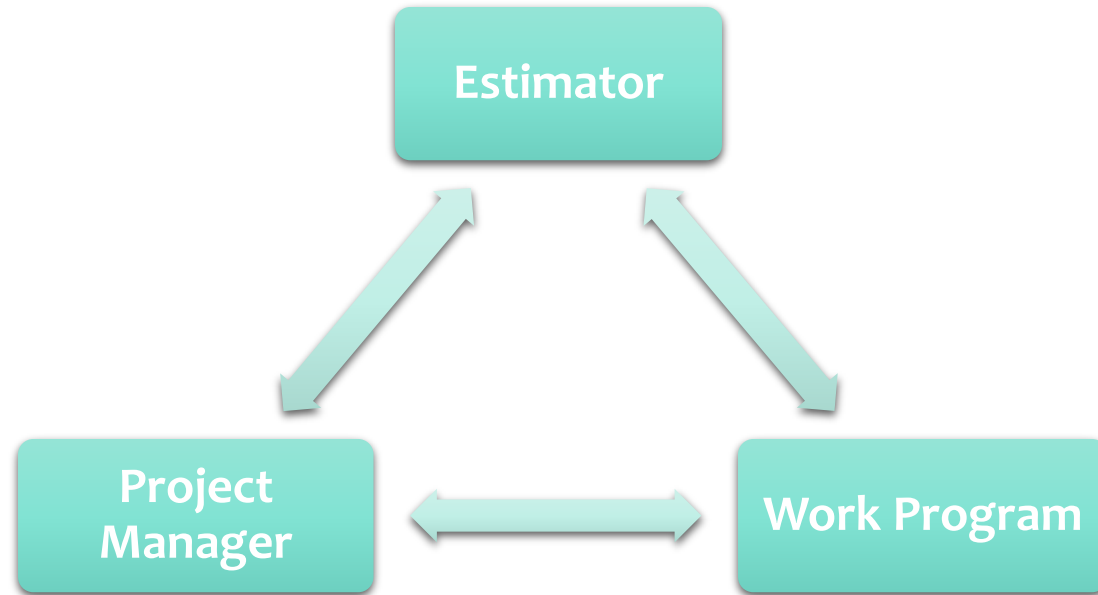
Cost Estimate Task Team

(Recommendations to Ensure WP Stability)



- “Estimates should NEVER be artificially constrained to stay within budget.”
- “The project Scope of Work should be well defined early in project development. Significant scope changes should be approved by upper management.”
- “Districts should foster a culture that requires a close working relationship between project consultants, project managers and estimators to ensure the project features are accurately reflected in the estimate.”


Communication is Essential!



Useful Reports

- (R7) WPA vs. LRE
- (R6) Scope Tracking
- (R9) Project Summary for Selected FY
- (R10) District Summary Report (All FY)

Useful Reports



MyFlorida.com

LONG RANGE ESTIMATES

User ID: SP965FT

Role: Guest

Date: 6/10/2014

Home Reports

Reports

R6

Scope Tracking Report

R7

WPA vs LRE Report

R9

Project Summary for Selected Fiscal Year(s) Report

R10

District Summary Report



FDOT
Office of
Information Systems

For support please contact: [Service Desk](#)
[FDOT Privacy Policy](#)
[State Estimates Office](#)
[Cheri Sylvester](#), State Administrator
Telephone: (850) 414-4179



LRE
LONG RANGE ESTIMATES

Useful Reports

- WPA vs. LRE
- Scope Tracking
- Project Summary for Selected FY
- District Summary Report (All FY)

FDOT Long Range Estimating System - Production					
R10: District Summary Report					
District 01					
(This report lists only Official Primary versions)					
Project Number	Project Description	Project Manager	Letting FY	Project Grand Total	
193898-2-52-01	US 17 FROM CR 760A (NOCATEE) TO HEARD STREET	CES-NEM-JRP	2015	\$23,243,787.30	
194425-2-52-01	SR 17 (SE LAKEVIEW) FROM US 27/ 98 TO KENILWORTH BLVD	RLC-EAP-JML	2015	\$1,006,293.27	
194485-4-52-01	US 27 (SR 25) FROM LAKE ISIS AVENUE TO POLK C/ L	PBS-MLP-NLW	2014	\$226,395.00	
195416-6-52-01	SR 84 (DAVIS BLVD) FROM E OF SANTA BARBARA BLVD TO W OF RADIO ROAD	PBS-RFH-DEL	2015	\$90,260.26	
195718-4-52-01	SR 739 (METRO PKWY) FROM S OF WINKLER TO N OF WAREHOUSE ROAD	PBS-BAM-RFH	2099	\$4,623,580.15	
195718-5-52-01	SR 739 (METRO PKWY) FROM S OF HUNTER ST TO HANSON STREET	PBS-RFH-DEL	2099	\$2,250,792.95	
195718-6-52-01	SR 739 (METRO PKWY) FROM WESTWOOD ENTRANCE TO HANSON STREET	PBS-RFH-DEL	2099	\$13,519,803.00	
196114-2-52-01	US 41 (SR 45) FROM I-275 TO HILLSBOROUGH CL	CES-EAP-MMG	2014	\$5,054,119.12	
196904-2-52-01	SR 70 FROM NE 34TH AVENUE TO NE 80TH AVENUE	CES-NEM-JYW	2014	\$21,378,511.55	
196904-4-52-01	SR 70 FROM NE 80TH AVENUE TO BERMAN ROAD	CES-NEM-JRP	2014	\$20,444,624.89	
197394-1-52-01	SR 563 (N-S ROUTE) FROM PIPKIN ROAD TO SR 572(DRANE FIELD)	PBS-JYW-BMB	2050	\$83,025,331.78	
197534-4-52-01	US 27 FROM BARRY ROAD TO LAKE COUNTY LINE	RLC-NEM-CSM	2013	\$25,788,433.09	
197652-1-52-01	US 27 (SR 25) AT SR 60 INTERCHANGE	GEC-BAM	2099	\$9,084,908.71	
197709-1-52-01	US 27 FROM N OF CR 547 TO HOLLYHILL GROVE RD#1	PBS-RFH-BMB	2006	\$11,024,897.60	
198010-1-52-01	US 301 FROM WOOD STREET TO S OF UNIVERSITY PKWY	PBS-JYW-BMB	2099	\$34,368,976.24	

Contact Information



Estimating Systems Support Team / Program Management Office

Cheri Sylvester	Estimating Systems Support Manager	cheri.sylvester@dot.state.fl.us	(850) 414-4179
Melissa Hollis	BOE Coordinator	melissa.hollis@dot.state.fl.us	(850) 414-4182
John Moyle	Estimates Coordinator	john.moyle@dot.state.fl.us	(850) 414-4169
Dianne Perkins	Estimates Coordinator	dianne.perkins@dot.state.fl.us	(850) 414-4784



Demo



Questions?